VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

Amended paragraph on page 13, beginning at line 21:

At least one tool in the prior art appears designed to achieve blend intensity through creation of vortices and shear forces. This tool is sold by Littleford Day Inc. for use in its blenders and appears in cross-section as tool 16 in Figure 1. As shown in perspective view in Figure 3, the Littleford tool 16 has center shank 20 with a central bushing fixture 17A for engagement with locking fixture 17 at the end of shaft 14 (both fixture 17 and shaft 14 are shown in Figure 1). Bushing fixture 17A includes a notch conforming to a male locking key feature on locking fixture 17 (from Figure 1). Arrow 21 shows the direction in which tool 16 rotates upon shaft 14. A second scraper blade 16A may be mounted below tool 16 onto shaft 14 as shown in Figure 3. In the configuration shown, the Littleford scraper blade 16A comprises a shank mounted orthogonally to center shank 20 that emerges from underneath shank 20 in an essentially horizontal manner and then dips downward near its end region. The end region of blade 16A is shaped into a flat club shape with a leading edge near the bottom of the blending vessel (not shown) and the trailing edge sloping slightly upward to impart lift to particles scraped from the bottom of the vessel. The leading edge of the club shape runs from an outside corner nearest the blending vessel wall inwardly towards the general direction of shaft 14. The scraper blades are shorter than shank 20, and the combination of this shorter length plus the shape of the leading edge indicates that the function of the Littleford scraper blade is [to lift] directed toward lifting particles in the middle of the blending vessel upward from the bottom of the vessel.

Amended paragraph on page 15, beginning at line 18:

One aspect of the present invention is an improved blending tool for rotation upon a blending machine shaft, such tool comprising: a shank having a long axis, at least one end, and an end region proximate to the end; and a riser member fixedly mounted during rotation at the end region of the shank, said riser member having an outside surface with a forward region, wherein the forward region is angled outward from the plane perpendicular to the long axis of the shank at an angle between 10 and 16 degrees.

Amended paragraph on page 16, beginning at line 3:

Another aspect of the present invention is a blending machine comprising: a [vessel] chamber for holding a media to be blended; a blending tool mounted inside the [vessel] chamber, said blending tool comprising both (i) a shank having a long axis, at least one end, and an end region proximate to the end and (ii) a riser member fixedly mounted during rotation at the end region of the shank, said riser member having an outside surface with a forward region, wherein the forward region is angled outward from the long axis at an angle between 10 and 16 degrees; and (iii) a rotatable drive shaft, connected to the blending tool inside of the chamber, for transmitting rotational motion to the blending tool.

Amended paragraph on page 18, beginning at line 18:

In a manner similar to the Littleford tool shown in Figure 3, vertical risers 52 and 53 are angled, or canted, in relation to the plane perpendicular to the long axis of shank 51. Leading edges 52A and 53A are closer to the blending vessel wall than trailing edges 52B and 53B. The result is that the outside surface (shown as 55 in Figure 6) of riser 52 has a forward region (shown as 56 in Figure 6) proximate to leading edge 52A that is angled outward from the axis of center shank 51. Figure 5 shows this effect, with the gap, G, between leading edge 53A and the

wall of vessel 10 being approximately 5 millimeters when tool 50 is sized for a 10 liter blending vessel. Particles that pass within this gap, g, remain relatively stationary in relation to the wall of vessel 10. Once leading edge 53A has swept past a particular particle in gap G, however, then it becomes subject to vortices formed along the outside surface of riser 53. These vortices form because riser 53 angles away from the wall of vessel 10, thereby inducing a partial vacuum in the space between the outside surface of riser 53 and vessel wall 10. Some particles remain "trapped" within these vortices and are swept along at speeds approximating the velocity of riser 53 itself. The highest impact energies between particles occur when these swept along particles traveling at nearly the speed of riser 53 impact nearly stationary particles that had slipped through gap G. The number of these collisions is greatly increased by the angle of riser 53 in relation to shank 51 since the induced vortices tend to pull the nearly stationary particles towards riser 53.

Amended paragraph on page 19, beginnng at line 11:

A comparison of the specific dimensions of tool 50 of the present invention and the Littleford tool shown in Figure 3 shows a series of differences resulting in improvements under the present invention. Turning to Figure 6, an elevated vertical view shows the footprint outline of both tool 50 and the Littleford tool as viewed from above. In both tools, risers are mounted at the ends, or tips, or the tool. The angle between the <u>plane perpendicular to the long</u> axis of the shank and the placement of the risers is labeled as angle α. The diagonal dimension across the tool shank is labeled $D_{Tool.}$ Gap G is identified as shown. The outside surface of the riser is shown as 55, and the forward region of the outside surface is shown as 56. The long axis of shank 51 is shown as double headed arrow L.

Amended paragraph on page 28, beginning at line 35:

Turning now to Figure 11, the improvement of AAFD values caused by increased Specific Power during blending is demonstrated by 3 curves providing AAFD values for 3 levels of Specific Power. The y-axis of the chart in Figure [12] 11 indicates the percent of SiO_2 surface additives remaining after the AAFD procedures above. The x-axis shows three levels of sonification, including no sonification and sonification at 3 kJoules and 6 kJoules. Each curve was generated using identical toners having Surface Area Coverage of 160% which is equivalent to 6.7% weight percent total additive of SiO_2 and TiO_2 in a Surface Area Coverage Ratio of SiO_2 to TiO_2 of 3.0, and a [weightt] weight percent of Zinc Stearate equal to 0.5%. The only difference is the amount of Specific Power which, in turn, is the direct result of different tools used during the blending process.

Amended paragraph on page 32, beginning at line 28:

In summary, this description of the present invention has described an improved blending tool, an improved method of making toners, and improved toners with greater quantities of surface additives attached to toner particles with stronger attachments. The improved blending tool of the present invention includes raised risers at the end of a central shank, such risers being angled relative to the plane perpendicular to the axis of the shank at an angle less than 17 degrees. The improved tool may also have "swept-back" scraper blades mounted at the mid-section of the central shank. When compared to known blending tools in the prior art, a tool of the present invention permits higher blend intensity than heretofore possible. Higher blend intensity enables substantial cost savings by decreasing the time required for toner blending, thereby increasing productivity. Moreover, the high intensity blending of the present invention yields an improved toner composition having greater quantities of surface additives than heretofore known attached with